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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,608	02/12/2004	Donald J. Curry	117745	3939
27074	7590	11/28/2007		
OLIFF & BERRIDGE, PLC. P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
			EXAMINER RASHIDIAN, MOHAMMAD M	
			ART UNIT 2624	PAPER NUMBER
			NOTIFICATION DATE 11/28/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/776,608

Applicant(s)

CURRY ET AL.

Examiner

Mehdi Rashidian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooper, Jr. (US Patent 4,718,090) henceforth referred to as Cooper.

Regarding **Claim1**, Cooper teaches, a method for identifying regions of pixels in image data, comprising: a) identifying a blob containing pixels in a first line of image data which differ in color characteristics by less than a predefined amount, (fig. 1, abstract, column 1, lines 51-56, all blobs on the first line are new blobs),

- b) Associating the blob with a temporary blob identifier, (fig. 1, abstract, column 6, lines 29-36),
- c) Identifying additional blobs containing pixels in adjacent lines of the image data, which differ in color characteristics by less than the predefined amount, (fig. 1, abstract, column 4, lines 44-56),

- d) Associating the additional blobs with the temporary blob identifier, if the additional blobs are linked to the blob, (fig. 1, abstract, column 6, and lines 29-36).

Regarding **Claim2**, Cooper teaches, the method of **claim 1**, further comprising: counting a total number of the pixels in the blobs associated with the temporary blob identifier, (fig. 1, abstract, column 4, lines 44-56, reads number).

Regarding **Claim3**, Cooper teaches, the method of **claim 2**, further comprising: calculating a normalized color value for the temporary blob identifier, based on a summation of pixel color values and the total number of pixels in the blobs associated with the temporary blob identifier, (column 15, lines 55-65, pixels values of previous line is added to present line and temporarily stored).

Regarding **Claim4**, Cooper teaches, the method of **claim 1**, further comprising: storing the temporary blob identifier as a permanent blob, when it is determined that no additional blobs are going to be associated with the temporary blob identifier, (fig. 17, column 17, lines 45-55).

Regarding **Claim5**, Cooper teaches, a method for identifying regions of pixels in image data, comprising: identifying a blob containing pixels in a peripheral line of image data which differ in color characteristics by less than a predefined amount,

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(fig. 1, abstract, column 1, lines 64-68, Examiner view of "peripheral" in this claim is consecutive lines where in the prior art: as the pixels of segment in the previous line in the pixel by pixel comparison, the new segment ...),

- And associating the blob with a temporary blob identifier; successively identifying a next blob containing pixels which differ in color characteristics by less than the predefined amount starting with a next adjacent line adjacent to the peripheral line, (fig. 1, abstract, column 6, lines 22-38, when two blobs are found to be touching...),
- Associating the next blob with the temporary blob identifier if the next blob is linked to either the blob or a prior next blob which is linked to the blob based on linking information of the next blob, (fig. 1, abstract, column 6, lines 22-38, when two blobs are found to be touching in the downward connectivity...),
- Continue successively identifying a next blob containing pixels which differ in color characteristics by less than the predefined amount of a next adjacent line adjacent to a new next adjacent line, (figs. 5A-5B, column 10, lines 34-50, the merging of adjacent blobs...),
- And continuing to associate the next blob of a next adjacent line with the temporary blob identifier until a line is reached which has no blobs

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linked to the blob, (figs. 5A-5B, column 10, lines 40-44, blobs is determined to be its own ancestor).

Regarding **Claim6**, Cooper teaches, the method of **claim 5**, further comprising: creating a new temporary blob identifier if a next blob of a new next adjacent line is not linked to a prior next blob on a previous next adjacent line; and associating the next blob of a new next adjacent line with the new temporary blob identifier, (figs. 5A-5B, column 9, lines 40-49).

Regarding **Claim7**, Cooper teaches, the method of **claim 5**, the method of claim 5, further comprising: linking a plurality of next blobs located in a single next adjacent line with a temporary blob identifier, if the blobs are linked horizontally within the next adjacent line, and linked vertically to the blob or the prior next blob which is linked to the blob; (column 8, lines 30-39).

Regarding **Claim8**, Cooper teaches, the method of **claim 5**, the method of claim 5, further comprising: counting a total number of the pixels in blobs associated with the temporary blob identifier, (fig. 1, abstract, column 4, lines 44-56, reads number).

Regarding **Claim9**, Cooper teaches, the method of **claim 5**, further comprising: calculating a normalized color value for the temporary blob identifier; based on a

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summation of pixel color values and the total number of pixels in blobs associated with the temporary blob identifier, (column 15, lines 55-65, pixels values of previous line is added to present line and temporarily stored).

Regarding **Claim10**, Cooper teaches, the method of **claim 5**, further comprising: storing the temporary blob identifier as a permanent blob, when a next line is not linked to a previous line, (fig. 17, column 17, lines 45-55).

Regarding **Claim11**, Cooper teaches, the method of **claim 10**, further comprising: initializing the temporary blob identifier after the temporary blob identifier has been stored as the permanent blob, (fig. 1, abstract, column 1, lines 50-65, each new Blob is initially assigned... number).

Regarding **Claim12**, Cooper teaches, the method of **claim 5**, further comprising: updating a blob identification map, which assigns the temporary blob identifier to pixels associated with the temporary blob identifier, (fig. 1, abstract, column 1, lines 35-50, each line of pixelsassociated binary value).

Regarding **Claim13**, Cooper teaches, the method of **claim 5**, further comprising: associating the prior next blob and the next blob with the temporary blob identifier, based on a translate table, (figs. 18-20, column 5, lines 45-55).

Regarding **Claim14**, Cooper teaches, an image data processing apparatus,

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comprising: a blob processor; and a memory coupled to the blob processor, the memory storing link information that links together two or more line blobs of the image data, (fig. 1, abstract, column 2, lines 30-57, block diagram of processing apparatus, memory, blob processor, column 11, lines 1-15, processor to compare data, column 1-2, lines 64-11, blob-link pairs to assign to the blob)

- Wherein the blob processor groups line blobs of a line and of continuously adjacent lines that are linked together into a single blob and assigns a unique blob ID to the single blob, (fig. 16, abstract, column 1-2, lines 60-11, having same blob number, column 4, lines 60-65, new blob number is generated by new blob generator)

Regarding **Claim 15**, Cooper teaches, the apparatus of **claim 14**, further comprising a linking processor coupled to the blob processor, the blob processor assigning pixels in a peripheral line to a blob according to their color characteristics, (fig. 16, abstract, column 1-2, lines 60-11, having same blob number, column 4, lines 60-65, new blob number is generated by new blob generator)

- And pixels in a next adjacent line to a next blob, and provides linking information linking the next blob to the blob according to the color characteristics of the next blob and the blob, (fig. 1, abstract, column 4, lines 44-56),

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- Wherein the blob processor successively identifies a new next blob on a new next adjacent line adjacent to the next adjacent line according to color characteristics, (fig. 1, abstract, column 6, lines 29-36),
- The linking processor linking the new next blob in the next line to a new temporary blob identifier if the new next blob is not linked to any other blobs in a previous next adjacent line, (fig. 1, abstract, column 6, lines 29-36).
- Linking the next blob to a previous blob, and linking the previous blob to the temporary blob identifier if the previous blob is linked to the blob, (fig. 17, column 17, lines 45-55),
- The linking processor associating the next blob on the next adjacent line with the temporary blob identifier, until a line is reached which has no blobs linked to the blob, (fig. 17, column 17, lines 45-55).

Regarding **Claim 16**, Cooper teaches, the apparatus of **claim 15**, further comprising a scan table translator that associates the next blob and the previous blob with the temporary blob identifier, (fig. 1, abstract, column 4, lines 44-54).

Regarding **Claim 17**, Cooper teaches, the apparatus of **claim 15**, further

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comprising: a blob content updater for updating a blob ID map to assign pixels in the current line to the temporary blob identifier which are associated with the temporary blob identifier, (column 5, lines 50-55).

Regarding **Claim 18**, Cooper teaches, the apparatus of **claim 17**, wherein the blob content updater also maintains information on the total pixel count contained in the temporary blob, (column 5, lines 45-55).

Regarding **Claim 19**, Cooper teaches, the apparatus of **claim 15**, further comprising: a horizontal blob identifier which for detects the state of a flag, which indicates whether a next blob is horizontally linked to any other blobs on the same next adjacent line, and vertically linked to the previous blob, and if so, links each of the horizontally linked blobs to the temporary blob identifier, (figs. 1, 2A and 2B, column 7, lines 49-60).

Regarding **Claim 20**, Cooper teaches, the apparatus of **claim 15**, wherein the temporary blob identifier is obtained by following a ylink field, which associates the next blob with the previous blob, wherein the previous blob is linked to the temporary blob identifier by a translate table, (figs. 1, 19 and 20, column 15, lines 35-50).

Regarding **Claim 21**, Cooper teaches, the apparatus of **claim 15**, further comprising: a blob table generator, for generating a permanent table of blobs

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entry for the temporary blob identifier, when a next line is not linked to a previous adjacent line, (figs. 1, 19 and 20, column 15, lines 35-50).

Regarding **Claim 22**, Cooper teaches, an apparatus for identifying regions in image data, comprising: means for assigning pixels in a peripheral line to a blob according to their color and edge characteristics, (fig. 1, abstract, column 2, lines 30-57, block diagram of processing apparatus, memory, blob processor),

- For assigning pixels in a next adjacent line to a next blob, and for providing linking information linking the next blob to the blob according to the color characteristics of the next blob and the blob, (fig. 1, abstract, column 4, lines 44-56),
- For successively identifying a new next blob on a new next adjacent line adjacent to the next adjacent line according to color characteristics; means for linking the new next blob in the next line to a new temporary blob identifier if the new next blob is not linked to any other blobs in a previous next adjacent line, (fig. 1, abstract, column 6, lines 29-36),
- For linking the next blob to a previous blob, for linking the previous blob to the temporary blob identifier if the previous blob is linked to the blob, and for associating the next blob on the next adjacent line with the temporary blob identifier, until a line is reached which has no blobs linked to the blob,

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(fig. 17, column 17, lines 45-55).

Regarding **Claim 23**, Cooper teaches, the apparatus of **claim 22**, further comprising: scan table translation means for translating the linking information for a next blob to a previous blob, to linking information for the next blob to the temporary blob identifier, (fig. 1, abstract, column 4, lines 44-54),

- Blob table generating means for storing the information associated with the temporary blob identifier as a permanent blob, when a next adjacent line is reached that has no links to the temporary blob identifier, (fig. 1, abstract, column 4, lines 44-59),
- Blob content updating means for updating the information associated with the temporary blob identifier and updates the blob ID map to use the temporary blob identifiers; horizontal blob identifying means for detecting whether the next blob is linked horizontally to any other blobs on the next adjacent line, and if so, for linking each of the horizontally linked blobs to the temporary blob identifier, (figs. 1, 2A and 2B, column 7, lines 49-60).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper, in view of Robert P. Loce (US Patent 7,006,244) henceforth referred to as Loce.

Regarding **Claim 24**, Cooper teaches, the method of **Claim 1**, while Loce teaches, a computer-readable medium having computer-readable program code embodied therein, the computer-readable program code performing the method of **claim 1**, (figs. 1 and 3, abstract, column 5, lines 40-60), it would have been obvious to one of ordinary skill in the art to add computer processing techniques in order to add processing speed.

Regarding **Claim 25**, Cooper teaches, the method of **Claim 1**, while Loce teaches, a xerographic marking device using the method of **claim 1**, (figs. 1-3, abstract, column 5, line 31 and lines 41-45), it would have been obvious to one of ordinary skill in the art to include xerographic marking in order to improve output

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image quality.

Regarding **Claim 26**, Cooper teaches, the method of **Claim 1**, while Loce teaches, a digital photocopier using the method of **claim 1**, (figs. 1-3, abstract, column 5, lines 41-60), it would have been obvious to one of ordinary skill in the art to include digital photocopier in order to improve image quality of output devices.

Conclusion

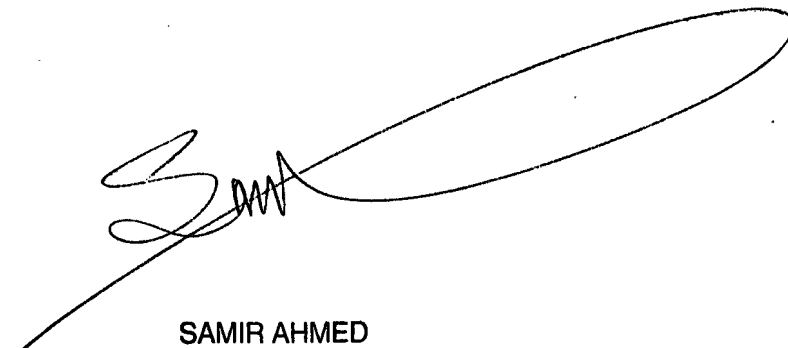
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Rashidian whose telephone number is (571) 272-9763. The examiner can normally be reached on Mon-Thurs 9:00AM to 8:00PM, ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MMR
11/22/2007



SAMIR AHMED
SUPERVISORY PATENT EXAMINER